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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,391	11/25/2003	Jae Kyum Kim	K-0565	4272
34610	7590	08/22/2007		
KED & ASSOCIATES, LLP P.O. Box 221200 Chantilly, VA 20153-1200			EXAMINER HECKERT, JASON MARK	
			ART UNIT 1746	PAPER NUMBER
			MAIL DATE 08/22/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/720,391	Applicant(s) KIM ET AL.	
	Examiner Jason Heckert	Art Unit 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-24 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-16 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 7/9/07 have been fully considered but they are not persuasive. In regards to the invention of Aouad, the "base" 30 covers and encloses the curved "cover" structure 31. When these structures come together, a cavity is formed to enclose wash aids that exit the apparatus through holes 38. Examiner maintains that Aouad's parts 30 and 31 are analogous to applicant's parts 72 and 75 respectively.
2. Examiner does not find that the proposed amendments clearly differentiate the applicant's invention from the prior art. First Aouad discloses that the device is preferably attached to the circumferential wall of a drum, including those in horizontal axis machines known to have a front-facing opening. Second, Aouad's device does extend along an axial direction to some extent thereby fully reading on the applicant's proposed amendment. Finally, any solid device that possesses depth into the drum will function as a lifting mechanism during rotation. Thus, Aouad already discloses the structures of the applicant's claims.
3. The objection of claim 17 as being a duplicate claim is withdrawn.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-4, 6-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts in view of Aouad. Roberts discloses a device for use in a standard washing machine, specifically installed inside a drum, tub, or wash basket 12. Said device comprises a ceramic tile 10 and receivers in the form of adhesive strips 20 and 22. Said adhesive strips are permanently attached to the inner surface of the wash basket (col. 3 line 4-5). As depicted in Fig. 4, the adhesive is placed along a circumferential direction, in an axial direction, and a predetermined space is left between each strip.

6. Roberts discloses the use of ceramics and associated plurality of receivers in a drum-type washing machine as discussed above, but does not disclose a housing. Aouad discloses a housing (Fig. 1) for various wash aids to be fixed to the drum in a drum-type washing machine. Aouad further discloses the housing as comprising a curved structure 31 with holes 38, wherein wash aids are inserted into this curved structure and flow out the holes. This structure is hollow and therefore has an open face facing the drum (see figure 3 of the provisional application 60/356544) that is covered by the base 30, which is then attached to the wall of the drum by means 301. The cover 31 and base 30 respectively read on the "circumferential side" and "cover" of the applicant's invention. The circular curved cover 31 protrudes into the center of the drum along an axial direction of some length and thereby provides a laundry lifting function. Aouad discloses that the device is preferably attached to the circumferential wall of a drum, including those in horizontal axis machines known to have a front-facing opening (see 60/356544 specification page 11). It would have been obvious to one skilled in the art to modify Roberts and include housings as the ceramic receivers

instead of adhesive strips, as described by Aouad, to contain various ceramic media other than singular tiles.

7. In regards to claim 6, it has been amended to include the phrase "wherein at least one ceramic receiver comprises a plurality of ceramic receivers each with a housing." Examiner has interpreted this to be a mere duplication of the receiver and receiver housing apparatus of claim 1, which was rejected above. Duplication of parts was held to have been obvious. *St. Regis Paper Co. v. Beemis Co. Inc.* 193 USPQ 8, 11 (1977); *In re Harza* 124 USPQ 378 (CCPA 1960). It would have been obvious at the time of the invention to modify Roberts in view of Aouad, as stated above, and further include multiple receivers in multiple housings, as it is nothing more than a mere duplication of parts.

8. In regards to claim 8 – 10, hooks fixing to holes and guide grooves are notoriously well known in the art. Furthermore, their use is functionally equivalent to the adhesive strips 20 and 22 disclosed by Roberts and pegs 404 and holes 405 disclosed by Aouad. Also, rearrangement of parts was held to have been obvious. *In re Japikse* 86 USPQ 70 (CCPA 1955). It doesn't matter if hooks, pegs, or grooves are formed on the inside of the drum with their respective counterparts formed on the housing or vice versa, as all are obvious choices achieving the end result of adhering the housing to the drum. It would have been obvious to modify Aouad and use guide grooves or hooks to adhere the housing to the drum, as taught by convention.

9. In regards to claim 11, rearrangement of parts was held to have been obvious. *In re Japikse* 86 USPQ 70 (CCPA 1955). Aouad discloses all of the parts described in

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the claimed invention. Simply orienting them in a different manner cannot be considered novel. It would have been obvious to modify Aouad and orient the housing so that the cover adheres to or is built into the drum, to provide a solid connection between the housing and the drum.

10. In regards to claim 12, reinforcement ribs, as well as other structural reinforcements, are used conventionally throughout the art to increase the structural integrity of a variety of apparatuses and cannot be considered novel. It would have been obvious to modify Aouad and provide a structural reinforcement on the cover in order to increase structural integrity.

11. Claims 13 -16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts in view of Aouad in view of Kobayashi and further in view of Kikuta. Roberts discloses the use of a ceramic in a washing machine, but does not discuss materials nor disclose the use of particles or beads. Kobayashi discloses a ceramic receiver for use with ceramic powder, which is naturally of irregular size and shape, capable of radiating far infrared rays or piezoelectric ceramic material (col. 3 lines 19). Said materials are to be used to increase the washing activity of water in a washing machine. Furthermore, in figures 5 and 6, Kobayashi shows said powder in the form of balls 5. Therefore it would have been obvious to modify Roberts in view of Aouad, as stated above, and Kobayashi and include ceramic media in the form of balls or an irregular powder-like particulate in order to increase the effective surface area exposed to the wash water.

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12. Roberts and Kobayashi don't specify the particular ceramic, but do indicate typical ceramics can be used and suggest those that radiate far infrared rays. Kikuta discloses that various ceramics containing alumina and silica are far infrared radiating materials (col. 1 line 16-19). Thus, it would have been obvious to modify Roberts in view of Aouad, as stated above, and include aluminum oxide and silicon oxide (alumina and silica) as taught by Kikuta, in the form of particles or beads as taught by Kobayashi, in order to achieve the water activating effect of far infrared radiating materials.

13. In regards to claim 15, sintered bodies are very common throughout the art when the combination of two materials is preferred. Considering that alumina and silica are common infrared radiating materials, it would have been obvious to form the silica/aluminum balls by sintering in order to provide a consolidated structure for placement in a washing machine.

Allowable Subject Matter

14. Claim 17 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The specific claimed design of the ceramic material, having an elastic center and a ceramic exterior, has patentability.

15. Claims 18-24 allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Heckert whose telephone number is (571) 272-2702. The examiner can normally be reached on Mon. to Friday, 8:00 - 5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMH



MICHAEL BARR
SUPERVISORY PATENT EXAMINER